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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,748	02/05/2004	Masahiro Tomamoto	JCLA13023	5574
7590	06/01/2005			
J.C. Patents 4 Venture, Suite 250 Irvine, CA 92618			EXAMINER HUG, ERIC J	
			ART UNIT 1731	PAPER NUMBER
DATE MAILED: 06/01/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/773,748	Applicant(s) TOMAMOTO ET AL.	
	Examiner Eric Hug	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 6, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Brichard (US 3,399,047).

Brichard discloses a melting device for manufacturing flat glass comprising a melting furnace (1), a conditioning compartment (2), and a plurality of distributor canals (e.g., 11, 11', 12, 12'...) which branch off from the conditioning compartment. A supply of molten glass flows out of the furnace, through the conditioning compartment, and into the canals. The conditioning compartment is effectively a distributor for the canals. Glass forming devices are at the ends of the canals. The device reads on the structural elements of claim 1, namely the melting furnace, the distribution portion, and the plurality of flow branches. Regarding claim 2, the canals are narrower than the distributing channel, effectively providing resistance to the flow of molten glass as per the claimed distribution resistance providing portions. Regarding claim 3, the canals are sized so that the molten glass travels the same total path length from the outlet of the furnace to a forming unit regardless of which canal it flows into. Thus the supply pressures within the canals are equalized. The baffles also provide for flow equalization. Regarding claim 6,

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baffles 16 are provided in each of the branches. Regarding claim 11, a heating means 28 is provided in the conditioning compartment (distributing portion). Regarding claim 13, the glass forming devices are glass sheet forming devices.

The properties of the molten glass given in claims 1 and 11 do not limit the structure of the claimed device. See MPEP 2115.

2. Claims 1, 2, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Boettner (US 3,420,653).

Boettner discloses a glass melting furnace having a melting zone 13, fining zone 15, a distributor 27 and forehearths 35 with downstream orifices 39. The forehearths constitute branched paths from the distributor to a plurality of forming devices. The furnace comprises the structural elements of claim 1, namely the melting furnace, the distribution portion, and the plurality of flow branches. Regarding claim 2, the forehearths are narrower than the distributing channel, effectively providing resistance to the flow of molten glass as per the claimed distribution resistance providing portions. Regarding claim 8, the depth of the distributor is shallower than the depth of the melting zone (column 4, lines 17-28).

The properties of the molten glass given in claim 1 do not limit the structure of the claimed device. See MPEP 2115.

3. Claims 1, 2, 3, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sorg et al (US 5,573,569).

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Sorg discloses a glass melting device comprising a melting tank 1, throat 3, a distribution channel 5, and forehearths 13, 14, 15 which branch from the distribution channel. The forehearths lead to forming devices at the output of extraction points E. Molten glass passes from the tank 1 through throat 3, into and through distribution channel 5, and into the forehearths. The distribution channel and forehearths are described as being shallow. Cooling zones are designated for the distribution channel or for the forehearths. The depth of the distribution channel is at most 300 mm when the cooling zones are located therein.

The device reads on the structural elements of claim 1, namely the melting furnace, the distribution portion, and the plurality of flow branches. Regarding claim 2, the forehearths are narrower than the distributing channel, effectively providing resistance to the flow of molten glass as per the claimed distribution resistance providing portions. Regarding claim 3, The device is designed to provide uniform flows and temperatures of glass melt through the forehearths, thus the pressure in the forehearths are equalized relative to one another. Regarding claim 10, the depth of the distribution chamber is clearly less than 500 mm.

The properties of the molten glass given in claim 1 do not limit the structure of the claimed device. See MPEP 2115.

4. Claims 1, 2, 8, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Blumenfeld (US 4,662,927).

Blumenfeld discloses a glass melting furnace having melter 10, throat 12, distributor 14, and four channels 16, 18, 20, and 22. Melted glass flow from the melter, through, into and through distributor 14, and into the channels. Glass forming devices are located at the ends of

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the channels. The device reads on the structural elements of claim 1, namely the melting furnace, the distribution portion, and the plurality of flow branches. Regarding claim 2, the channels are narrower than the distributing channel, effectively providing resistance to the flow of molten glass as per the claimed distribution resistance providing portions. Regarding claims 8 and 9, Figure 2 shows that the distributor is shallower than the melter and clearly less than $\frac{4}{5}$ the depth of the melter. Regarding claim 11, burners are provided in the distributor for controlling melt temperature. The burners are provided along regions where melt is exposed to longer paths of travel from the melter to the end of a channel.

The properties of the molten glass given in claims 1 and 11 do not limit the structure of the claimed device. See MPEP 2115.

5. Claims 1, 2, 4, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Russell et al (US 2,910,806).

Russell discloses a glass melting furnace having melting tank 10, a fining chamber 12, and a plurality of forehearths 14 which branch from the fining chamber. The fining chamber is effectively a distributor of molten glass for the forehearths. At the end of each forehearth is a group of conveying tubes 45 which receive molten glass from the forehearth and distribute to glass forming units 20. The conveying tubes can be made of platinum or other metal that prevents contamination of the glass melt (see column 9, lines 66-74). The furnace reads on the structural elements of claims 1 and 2 and on the materials of claims 4 and 12.

The properties of the molten glass given in claim 1 do not limit the structure of the claimed device. See MPEP 2115.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brichard (US 3,399,047) in view of Muniz et al (US 5,613,994).

Brichard discloses the glass melting device described above, wherein baffles are provided within each flow branch, the baffles being in contact with the molten glass flowing therethrough. No disclosure on what material the baffles are comprised of is provided.

Muniz discloses a glass melting furnace have a flow control barrier disposed in a throat portion of the furnace. The barrier is similar in structure and function to the baffle of Brichard. The portion of the barrier in contact with the molten glass is made of a corrosion resistant metal such as molybdenum, platinum, or rhodium (column 2, first paragraph). Therefore at the time of the invention, it would have been obvious to one skilled in the art to make the baffles of Brichard out of a similar metal to provide corrosion resistance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 14-18 provide for glass product manufactured by the use of the claimed molten glass supply device, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass, and it is further unclear what glass product results from the use. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Allowable Subject Matter

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 5 is allowable for further heating the molten glass in the distribution resistance providing region by supplying a current through the metal walls in contact with the molten glass.

Claims 19 and 20 are allowed, because the prior art does not disclose or suggest a method of producing a glass product including the steps of obtaining a glass melt that exhibits a viscosity of 1000 poise at 1350 degrees C in a melting furnace and then distributing the molten glass through a distribution portion and a plurality of branch paths.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hornyak, Jr. et al (US 4,227,909).

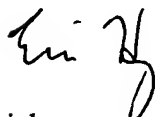
Labino (US 2,523,030)

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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